CLAIMS:

1   1.   A device for training one or more reading and spelling skills of a user including

2   phonological and morphological skills, the device comprising:

3   a graphical display that displays images to a user;

4   a user input device that permits the user to interact with the computer; and

5   a game that presents stimuli to the user so that the user can respond to the stimuli and

6   improve the reading and spelling skills of the user, the game further comprising a phonological

7   skills training portion for training the phonological skills of the user and a sound/symbol

8   correspondence training portion for training the sound/symbol correspondence skills of the user

9   wherein the game trains the phonological skills of the user and then transitions to training the

10   sound/symbol correspondence skills once the phonological skills are mastered.

11   2.   The device of Claim 1, wherein the phonological training portion further

12   comprises a morphological skills training portion to train the user's skills at decoding a word and

13   vocabulary.

1   3.   The device of Claim 2, wherein the sound/symbol training portion further

2   comprises a phonics portion to train the user's skills at decoding printed words and awareness of

3   the connections between speech and print.
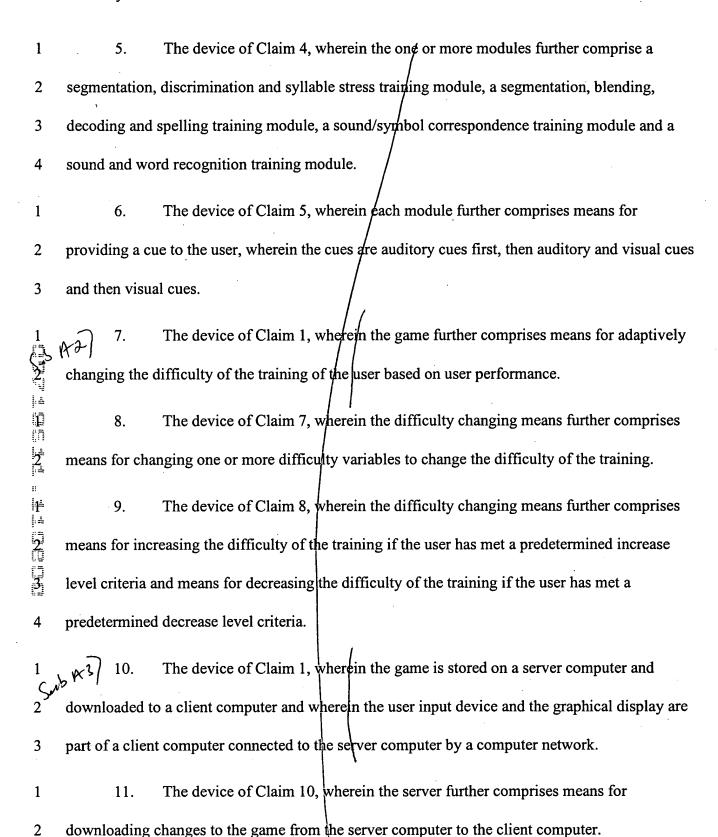
1   4.   The device of Claim 1, wherein the game further comprises one or more modules

2   that train different skills of the user wherein each module trains one or more different skills of

3   the user.

1   5.   The device of Claim 4, wherein the one or more modules further comprise a

2   segmentation, discrimination and syllable stress training module, a segmentation, blending,

3   decoding and spelling training module, a sound/symbol correspondence training module and a

4   sound and word recognition training module.

1   6.   The device of Claim 5, wherein each module further comprises means for

2   providing a cue to the user, wherein the cues are auditory cues first, then auditory and visual cues

3   and then visual cues.

1   7.   The device of Claim 1, wherein the game further comprises means for adaptively

2   changing the difficulty of the training of the user based on user performance.

1   8.   The device of Claim 7, wherein the difficulty changing means further comprises

2   means for changing one or more difficulty variables to change the difficulty of the training.

1   9.   The device of Claim 8, wherein the difficulty changing means further comprises

2   means for increasing the difficulty of the training if the user has met a predetermined increase

3   level criteria and means for decreasing the difficulty of the training if the user has met a

4   predetermined decrease level criteria.

1   10.   The device of Claim 1, wherein the game is stored on a server computer and

2   downloaded to a client computer and wherein the user input device and the graphical display are

3   part of a client computer connected to the server computer by a computer network.

1   11.   The device of Claim 10, wherein the server further comprises means for

2   downloading changes to the game from the server computer to the client computer.

1   12.   The device of Claim 1, wherein the game is stored on a compact disk and then

2   loaded into a computer having the graphical display and the user input device.

1   13.   The device of Claim 10, wherein the server further comprises a diagnostic tool for

2   testing the skills of the user in order to customize the game for a particular user and means for

3   downloading the customized game from the server computer to the client computer of the

4   particular user.

1   14.   The device of Claim 10, wherein the server further comprises a scoring database

2   that stores the scores of the users of the system.

1   15.   The device of Claim 14, wherein the server further comprises means for

2   generating statistics about the scores stored in the scoring database.

1   16.   The device of Claim 1, wherein the game further comprises a module for training

2   the user's skills at identifying the correspondence between sounds and symbols.

1   17.   The device of Claim 16, wherein the module further comprises a task in which the

2   user sorts words into one or more categories in order to identify patterns in printed words.

1   18.   The device of Claim 17, wherein the sorting task further comprises means for

2   sorting words based on an initial portion of a word, means for sorting words based on a middle

3   portion of the words and means for sorting a word based on a final portion of the words.

1   19.   The device of Claim 17, wherein the module further comprises a second task in

2   which the user sorts words into one or more semantic categories.

1   20.   The device of Claim 17, wherein the module further comprises a third task in

2   which the user identifies a word that is spelling is reverse order to a target word.

1   21.   A method for training one or more reading and spelling skills of a user including

2   phonological and morphological skills using a computer system having a graphical display for

3   displaying images to the user and a user input device to permit the user to interact with the

4   computer, the method comprising:

5   executing a game that presents stimuli to the user so that the user can respond to the

6   stimuli and improve the reading and spelling skills of the user, the game further comprising a

7   phonological skills training portion for training the phonological skills of the user and a

8   sound/symbol correspondence training portion for training the sound/symbol correspondence

9   skills of the user wherein the game trains the phonological skills of the user and then transitions

10   to training the sound/symbol correspondence skills once the phonological skills are mastered.

11   22.   The method of Claim 21, wherein the phonological training portion further

12   comprises a morphological skills training portion to train the user's skills at decoding a word and

3   vocabulary.

1   23.   The method of Claim 22, wherein the sound/symbol training portion further

2   comprises a phonics portion to train the user's skills at decoding printed words.

1   24.   The method of Claim 21, wherein the game further comprises simultaneously

2   training one or more skills of the user using one or more modules that train different skills of the
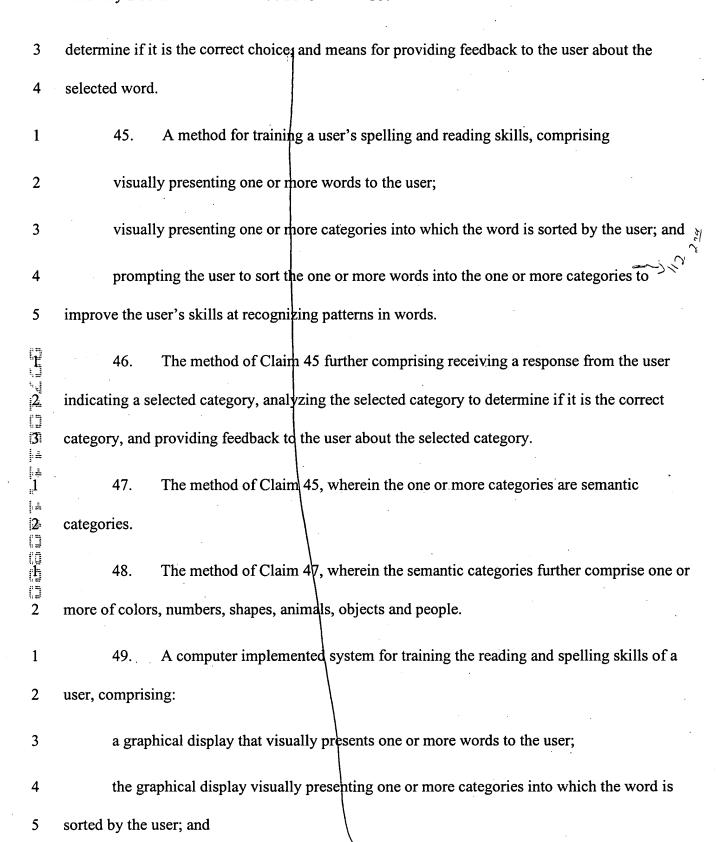
3   user.

1   25.   The method of Claim 24, wherein the one or more modules further comprise a

2   segmentation, discrimination and syllable stress training module, a segmentation, blending,

3   decoding and spelling training module, a sound/symbol correspondence training module and a

4   sound and word recognition training module.

1   26.   The method of Claim 25, wherein each module further comprises providing a cue

2   to the user wherein the cues are auditory cues first, then auditory and visual cues and then visual

3   cues.

1   27.   The method of Claim 21, wherein the game further comprises adaptively changing

2   the difficulty of the training of the user based on user performance.

1   28.   The method of Claim 27, wherein the difficulty changing further comprises

2   changing one or more difficulty variables to change the difficulty of the training.

1   29.   The method of Claim 28, wherein the difficulty changing further comprises

2   increasing the difficulty of the training if the user has met a predetermined increase level criteria

3   and decreasing the difficulty of the training if the user has met a predetermined decrease level

4   criteria.

1   30.   The method of Claim 21, wherein the game is stored on a server computer and

2   downloaded to a client computer and wherein the user input method and the graphical display are

3   part of a client computer connected to the server computer by a computer network.

1   31.   The method of Claim 30, wherein the server further comprises downloading

2   changes to the game from the server computer to the client computer.

1   32.   The method of Claim 21, wherein the game is stored on a compact disk and then

2   loaded into a computer having the graphical display and the user input method.

1   33.   The method of Claim 30, wherein the server further comprises testing the skills of

2   the user with diagnostic tool in order to customize the game for a particular user and

3   downloading the customized game from the server computer to the client computer of the

4   particular user.

1   34.   The method of Claim 30, wherein the server further comprises using a scoring

2   database that stores the scores of the users of the system.

1   35.   The method of Claim 34, wherein the server further comprises generating

2   statistics about the scores stored in the scoring database.

1   36.   The method of Claim 21, wherein the game further comprises a module for

2   training the user's skills at identifying the correspondence between sounds and symbols.

1   37.   The method of Claim 36, wherein the module further comprises a task in which

2   the user sorts words into one or more categories in order to identify patterns in printed words.

1   38.   The method of Claim 37, wherein the sorting task further comprises sorting words

2   based on an initial portion of a word, sorting words based on a middle portion of the words and

3   sorting a word based on a final portion of the words.

1   39.   The method of Claim 37, wherein the module further comprises a second task in

2   which the user sorts words into one or more semantic categories.

1   40.   The method of Claim 37, wherein the module further comprises a third task in

2   which the user identifies a word that is spelling is reverse order to a target word.

1   41.   A method for training a user's spelling and reading skills, comprising

2   visually presenting a target word to the user for a predetermined time;

3   visually presenting a series of words to the user after the target word is removed; and

4   prompting the user to identify the word in the series of words whose letters are in reverse

5   order to the target word.

1   42.   The method of Claim 41 further comprising receiving a response from the user

2   indicating a selected word, analyzing the selected word to determine if it is the correct choice,

3   and providing feedback to the user about the selected word.

1   43.   A computer implemented system for training the reading and spelling skills of a

2   user, comprising:

3   a graphical display that visually presenting a target word to the user for a predetermined

4   time;

5   the graphical display visually presenting a series of words to the user after the target word

6   is removed; and

7   means for prompting the user to identify the word in the series of words whose letters are

8   in reverse order to the target word.

1   44.   The system of Claim 43 further comprising a user input device that receives a

2   response from the user indicating a selected word, means for analyzing the selected word to

3   determine if it is the correct choice; and means for providing feedback to the user about the

4   selected word.

1   45.   A method for training a user's spelling and reading skills, comprising

2   visually presenting one or more words to the user;

3   visually presenting one or more categories into which the word is sorted by the user; and

4   prompting the user to sort the one or more words into the one or more categories to

5   improve the user's skills at recognizing patterns in words.

1   46.   The method of Claim 45 further comprising receiving a response from the user

2   indicating a selected category, analyzing the selected category to determine if it is the correct

3   category, and providing feedback to the user about the selected category.

1   47.   The method of Claim 45, wherein the one or more categories are semantic

2   categories.

1   48.   The method of Claim 47, wherein the semantic categories further comprise one or

2   more of colors, numbers, shapes, animals, objects and people.

1   49.   A computer implemented system for training the reading and spelling skills of a

2   user, comprising:

3   a graphical display that visually presents one or more words to the user;

4   the graphical display visually presenting one or more categories into which the word is

5   sorted by the user; and

6   means for prompting the user to sort the one or more words into the one or more

7   categories to improve the user's skills at recognizing patterns in words.

1   50.   The system of Claim 49 further comprising a user input device that receives a

2   response from the user indicating a selected category, means for analyzing the selected category

3   to determine if it is the correct category, and means for providing feedback to the user about the

4   selected category.

1   51.   The system of Claim 49, wherein the one or more categories are semantic

2   categories.

52.   The system of Claim 51, wherein the semantic categories further comprise one or

more of colors, numbers, shapes, animals, objects and people.